An Assessment of Key Success Factors of Transport and Logistics Business A Case Study

Siriwimol Rattanachaimongkol[1] and Thanyaphat Muangpan[2]

[1,2]Faculty of Logistics, Burapha University,
Chonburi, Thailand
[1]siriwimoltk@gmail.com, 64920483@go.buu.ac.th

Abstract

The purposes of this research were 1) Study the business success factors of transport and logistics entrepreneurs 2) Assess the business success factors of case study transport and logistics company. 3) Propose the ways to develop the case study companies' transport and logistics business capability. The population of this research are representative group of case study of transport and logistics company who has been selected from expertise and directly involved in many sectors—thirty-six people, such as senior executives, middle executives, operational executives, and operational employees. The tools that used in this research are questionnaire method by using analyst by statistics theory such as frequency, percentage, mean, and standard deviation distribution. The factors of case study company's overall factor were high value which considering each factor. The result has shown that each group of factors as a high level consisted of 6 factors; planning or forecasting customer needs, services to customers and supporting activities, factors in logistics communication. For the result group related Products and order management, procurement, factory location, warehouse management, and transportation factors which should be promote continuously. And the result group of factors that shown as medium to low level are factors in material handling and packaging, factors in inventory management and reverse logistics factors which the company should be more attention to improvement and development in further continuously.

Keywords: logistics business, capacity development, business environment, critical success factors

Introduction

Background

The current driven business strategy that was severe and rapid business changes (Disruption Business), various uncertainties that arise included the target groups or customer groups that have changed their needs from the original era. Technologies and innovations (Digital Transformation) have begun to play more roles in industrial sectors worldwide to meet the market's needs. During the 21st century, there has been a significant change in the business sector of various organizations. Hence some businesses need help to adapt or cope with changes in digital technology. Will be destroyed (Disruption) and must be shut down suddenly (Aisanon, 2022)

From the epidemic situation of the Coronavirus Disease 2019 (COVID-19) situation affecting the economy and business sectors around the world, the measures to control the spread of the disease that each country has put in place caused severe disruption or slowdown of economic activities. (Disruption) the logistics business is one of the businesses affected both positively and negatively, so the government sector and entrepreneurs need to adapt to the changes. Both in terms of administration and supply chain management to manage the risks arising from the epidemic situation, changing digital technology in the logistics business to reduce costs and respond to people's consumption behavior in the new normal (New Normal), including raising safety standards. While the government must solve problems, obstacles, and risks.

International logistics management to facilitate international transportation for entrepreneurs (Logistics Development Strategy Division, 2020)

The trend of the spread of the Coronavirus Disease 2019 (COVID-19) situation has resulted in changes in consumer behavior. There is a selection of product trading services in the form of E-commerce platforms or built-in software. Both in the form of websites, applications or others for online stores in particular. To be a trading channel for buyers and sellers in the market.

The rapid growth of the e-Commerce market directly impacts the global transport and logistics industry. This causes competition that tends to increase in price, speed and quality of service. Therefore, operators have a policy to develop the best service efficiency. By using the theory, the main idea in the logistics system is to make the cost as low as possible. Without affecting the delivery of goods to the hands of consumers on time, the main theoretical concepts in the logistics system focus on the connections between activities in each step from origin to destination. The activities that occur must have the most minor effect on the cost and the most excellent satisfaction. By allowing the supporting activities to facilitate the main activities as possible. Therefore, the theory and principles of logistics management can promote the competitiveness of the entire supply chain of the transport and logistics industry (the term Mr. Apipatchakul, 2003)

As mentioned above, it is found that changes are inevitable but can be adapted

to those changes, which comes from the basics of understanding and changing business conditions, Including constantly developing and enhancing the capability of doing business. This will be a method that will help companies to survive and compete in an era of uncertainty. Especially the industry of the transport and logistics business. It requires cooperation between different groups of service providers. Entrepreneurs need to adapt and find new business strategies to achieve maximum efficiency. To get the most benefit, the researcher has studied the business success factors of transport and logistics operators. The factors affecting the success of the transport and logistics business. Through the study of concepts and theories, success factors and approaches to develop business capability in transport and logistics.

Along with studying the factors that the transport and logistics business groups in Thailand that are successful and popular in the top 3, which are companies A, B and C, use in business operations. Assessing the potential and capabilities of the transport and logistics case studies creates a competitive advantage and increases the possibility of entrepreneurs of the company's case studies.

Research question

For this reason, the researcher studied success factors that can be successful entrepreneurs of case study companies to be sustainable based on nine main activity of logistics principles. How does the efficient prototype of logistics drive their business, such as company policy, traditional business, goal, and ways to improve logistics company? And the method way to enhance or develop the case study company to become the successful logistics company.

Research objective

1. Study the business success factors of transport and logistics entrepreneurs

2. Assess the business success factors of case study transport and logistics company

3. Propose the ways to develop the case study companies' transport and logistics business capability

Literature review

The industrial logistics performance index (ILPI) is a tool to assess the efficiency of industrial logistics which developed for collect data on global operations. The company's logistics are mainly in the industrial sector. It will divide the 9 logistics mainly activities and 3D logistics efficiency evaluation dimension to define the logistics efficiency indicators. Then the data will be analyzed and processed to compare the efficiency and operational performance of the company/operator. Organizational assessment with ILPI in all 9 logistics mainly activities consider of 3 dimensions with a total of 27 indicators, as shown in Figure 2. as follows below details:

1. The cost dimension; represents the cost ratio of logistics activities compared to the business's annual sales. It can use as a guideline to improve or control unnecessary excess costs without sacrificing quality. Trade or service

2. The time dimension; includes indicators that consider the duration of the movement of goods outside the production process. And the period of data movement, starting from the receipt of the data and ending at the delivery of the data to the next customer or user of the product or service.

3. The reliability dimension; includes indicators that measure the reliability of the delivery of goods and information. These can divide into two types: on-time and in-full delivery indicators.

ILPI is a tool used to measure and compare (benchmarking tools). Performance in logistics and supply chain management is a good starting point for learning to develop the organization, resulting in efficient logistics activities continuously. Fast, reliable and cost-effective.

Kaplan and Norton (1996:7-14) defined the importance of entrepreneurial success refers to the traditional business success measurement system. We will focus on financial measures. A methodology can measure it for measuring business success called the balanced scorecard with four perspectives: financial perspective (financial perspective), customer perspective (customer perspective), internal process perspective (internal process perspective), and learning and development (learning and growth perspective), so when looking at the overall picture of the success variables in the beauty business in terms of finance derived from the results of operations in terms of revenue and profit to be more non-monetary, it will result in service

provision and customer retention—considered as a goal that leads to success in business.

Metta Ardam et al. (2014) conducted a study on applying the evaluation guideline for the logistics management performance of v Powertech Co., ltd. The analysis of the operational situation of logistics management. S for the organizational assessment of v powder tech co., ltd. By analyzing the whole population of the research, including executives, department heads, supervisors, and employees of v powder tech co., ltd., totalling 220 people through the form of structured interviews, the results of the research found that the operating conditions of logistics management of v powder tech co., ltd. It consists of 5 aspects: 1) development of logistics technology in the organization, 2) warehouse management, 3) logistics strategy, 4) human resource development in logistics, and 5) sales forecasting according to customer needs, which is in line with the results of the opinion polls of those involved.

In conclusion, from the literature review, many concepts and theories are commonly used to assess business potential. Assess factors and business potential which lead to the success of that business. It has the same aim: to encourage entrepreneurs in various industries. Able to analyze and evaluate their performance. The result of the evaluation can apply to find ways to develop and improve the organization for better efficiency, which will enhance sustainable competitiveness.

Table 1 The Summary of literature reviews related to the factors used to study the success factors of transport and logistics entrepreneurs

Industrial Logistics Performance Index: ILPI	Logistics Scorecard	SERVQUAL	The supply chain performance metrics
Cost Dimension	The establishment strategy	Tangibility	Reliability: RL
Time Dimension	The planning and operational ability	Reliability	Responsiveness: RS
Reliability Dimension	The efficiency and effectiveness of logistics	Responsiveness	Agility: AG
	The information management system and information technology	Assurance	Cost: CO
	The collaborative enterprises	Empathy	Assets Management Efficiency: AM

Research methodology

Research design

This qualitative research studies the assessment of critical success factors of transport and logistics business has the order of research method as follows: first, review the prototype of a successful logistics business and the logistics way principles in 9 activities. Study the main activity of each successful logistics company that they primarily drive, promote, and emphasize for their business management. Secondly, determine the research objectives and research scope of collecting data on the success factor. Data sources determining the population of the case study included; executives and related employees, 36 people, and The group of employees was selected from participate in the business competency enhancement program who has knowledge and understanding of operations from many sectors (Cross-functional), including senior management, middle and operational levels and operational employees of the transportation and logistics business project of the case study company.Thirdly, reviewing research articles related to theories was a guideline for the implementation. Fourthly, data collection by the observation by questionnaire data collection method (questionnaire) from the target group to study the business success factors of transportation and logistics entrepreneurs. Fifth, analyze data through a chart and suggestions—finally, conclusion, discussion, and recommendation.

Data collection

This qualitative research study uses a questionnaire data collection method to assess critical success factors of transport and logistics businesses. (questionnaire) from the target group to explore the business success factors of transportation and logistics entrepreneurs through studying, researching, and gathering information related to business success factors of successful transportation and logistics entrepreneurs of Thailand, including considering success factors through the concept industrial logistics performance index (ILPI), the study of success factors. Through data analysis with statistical principles and theories, namely, percentage (percentage), mean (mean) and standard deviation (standard deviation)

Result

The results from the questionnaire there are 30 sample groups of employees working in a case study company related to logistics processes as follows:

1. Most of the population is female, accounting for 60%, and the rest are male. These represented 40 per cent, aged between 20-30 years, accounting for 53.3 per cent, followed by ages between 31-40 years, aged between 41-50 years and over 50 years, respectively. Most of the educational levels are bachelor's degrees. Accounted for 23 per cent, followed by a master's degree or higher and lower than a bachelor's degree, respectively, with 1-5 years of work experience representing 40%, followed by 6-10 years of work experience, and more than ten years of work experience, respectively.

2. The factors that study consisted of 9 main activities through the concept of the industrial logistics performance index (ILPI). It found that

Table 2 The Success factors of transport and logistics business processes

Success factors of transport and logistics business processes	Importance factor		
	$\bar{X}$	Sd	Result
ILPI1: DEMAND FORECASTING AND PLANNING	4.23	0.05	High
ILPI2: CUSTOMER SERVICE AND SUPPORT	4.18	0.13	High
ILPI3: LOGISTICS COMMUNICATION AND ORDER PROCESSING	4.22	0.08	High
ILPI4: PURCHASING AND PROCUREMENT	3.97	0.13	High
ILPI5: MATERIALS HANDLING AND PACKAGING	3.07	0.14	Medium
ILPI6: SITE SELECTION, WAREHOUSING AND STORAGE	3.81	0.24	High
ILPI7: INVENTORY MANAGEMENT	3.26	0.26	Medium
ILPI8: TRANSPORTATION	3.81	0.14	High
ILPI9: REVERSE LOGISTICS	2.60	0.07	Low
Total score	**3.68**	**0.54**	**High**

The result of the summary proposes guidelines for developing the capability of factors in transport and logistics business processes. Of successful leading companies in 9 logistics activities, it found that.

Table 3 Summary Proposal of approaches to develop the capability of factors in transport and logistics business processes. of successful leading companies in terms of 9 activities of Logistics principle (The potential concern that should be promoted even better)

The potential point	The suggested Business factor for driven strategy	Objective of Business-driven factor Strategy
ILPI1: DEMAND FORECASTING AND PLANNING	Customer Centric Strategy	According to customers' demand, that was focused on the promotion or sales plan to attract customer to buy company's product so the readiness for changed order will help companies to decrease costs and maintain a good customer's experience with the company's order fulfilment services prepare for changes in order volume in any time.
ILPI2: CUSTOMER SERVICE AND SUPPORT	Fulfilment Strategy Customer Loyalty Strategy	Should we encourage more advice to customers? to create a good attitude towards products or services, and the company makes customers know how to use the product correctly and can remember and have a good image for the company and its products or services in the long-term Focus on customer loyalty to the company, product, or service. Plus, the opportunity for the company to sell more products in other product lines (Cross Selling) for customers to positively recommend products or services to others' word-of-mouth speech (Words-of-Mouth) about the product. Which is reliable and popular
ILPI3: LOGISTICS COMMUNICATION AND ORDER PROCESSING	LEAN Strategy Agile Methodology Strategy	Should promote Agile work that can set short-term goals. They are also known as Sprint, which will help to adapt. And can adjust the position continuously and promptly in the event of an error and quickly learn the shortcomings and advantages of previous work, develop or apply new technologies to make work more efficient, encourage collaboration, and stimulate creativity for employees to have ideas that always want to improve their work.
ILPI4: PURCHASING AND PROCUREMENT	E-Procurement Strategy	Electronic procurement should be promoted because it is a convenient, fast, and easy access to product information. Some systems can provide tracking of order situations and delivery. Able to search for product information of suppliers. This will reduce the time spent on procurement work. especially the duration in selecting suppliers or those interested in participating in the auction. Communicate with each other quickly. Buyers and sellers can contact each other immediately. And can help reduce the use of human resources in the procurement process.
ILPI6: SITE SELECTION, WAREHOUSING AND STORAGE	Distribution center management Strategy	The consideration of factors in choosing the location of factories, warehouses and warehouses in the future should be encouraged because it is essential. If choosing the wrong place in addition to travel or transportation will not be comfortable then. The location of the factory or warehouse may affect the business when the company expands in the future**.**
ILPI8: TRANSPORTATION	Transportation management Strategy	It should promote cost-effective transportation, create convenience for customers, and focus on providing services that give customers maximum benefits and can be easily accessed.

Table 4 Summary Proposal of approaches to develop the capability of factors in transport and logistics business processes. Of successful leading companies in terms of 9 activities of Logistics principle (The development that should be promoted even better)

The development point	The suggested Business factor for driven strategy	Objective of Business-driven factor Strategy
ILPI5: MATERIALS HANDLING AND PACKAGING	Multiple pick-up point strategy Automated guided vehicles (AGVs)	It should focus on improving the management of goods movement to reduce redundant work and prevent product damage. and have a work plan considered and a fast, accurate, and non-damaging movement management system
ILPI7: INVENTORY MANAGEMENT	Flexible Storage Strategy Warehouse Management System	It should be improved and developed regarding customer product management to minimize damage. For example, the time management and use of space in the warehouse more efficiently Focus on delivering products to customers. Accurately, quickly, accurately and without damage.
ILPI9: REVERSE LOGISTICS	Pick-up and drop-off point Strategy Relate performance of reverse logistics Reverse Supply Chain	Should improve and developing a product return system will help to know much important information from customers such as problems encountered in use. Service life and satisfaction in use, etc. Such information can be used to develop products and services to make it even better.

Conclusion

From the analysis of statistical data, the researchers concluded the research findings as follows:

1) Respondents' General information found that the study's populations were employees and executives of a case study company involved in all logistics processes. Which is female. Most of them are between 20-30 years old and have a bachelor's degree. In addition, most of them have 1-5 years of work experience.

2) The evaluation results of the business success factors of transport and logistics operators of the case study company found that the overall level was high. When considering individual activities, it was found that

•*ILPI1 Demand Forecasting and Planning,* that is, Planning or forecasting of customer needs, has a high level of potential. And should continually promote and develop. When considering in detail, it was found that every indicator was at a high level. The indicator with the highest average of the top 3 are Indicator 1 Ability to respond to demand. of customers quickly, accurately, and timely, followed by indicator 3, the ability to build a good relationship with customer loyalty, and indicator 5, forecasting the volume of orders or providing services according to the number

• *ILPI2 Customer Service and Support that* providing services to customers and supporting activities has overall potential at a high level. And should continually promote and develop. When considering in detail, it was found that every indicator

was at a high level. The top 3 indicators with the highest average values are KPI 1. Financial factors are important in supporting business success, followed by KPI 3, Serviceability (Service Level) and the 5th indicator, consulting and recommending customers for maximum benefit and efficiency, respectively.

• *ILPI3 Logistics Communication and Order Processing* have a high potential. and should continually promote and develop. When considering in detail, it was found that every indicator was at a high level. The top 3 indicators with the highest average are the 2nd indicator, the investment in installing various equipment (Hardware), the 5th indicator, the accuracy rate of data transmission. or documents and the fourth indicator, data sharing planning, respectively.

• *ILPI4 Purchasing and Procurement* has a high level of potential. And should continually promote and develop. When considering in detail, it was found that every indicator was at a high level. The top 3 indicators with the highest average values were Indicator 4, Manufacturer Reliability and Accuracy Rate, followed by Indicator 3, Manufacturer Reliability and Accuracy Rate, and Indicators. Measure 5 Joint management plan with leading producers or business partners to provide an overview of business relationships. and KPI 1 Employee expense rate, Including the expenses used in purchasing operations

• *ILPI5 Materials Handling and Packaging* has moderate potential. and should continually improve and develop. When considering in detail, it was found

that the indicators were moderate to low. The indicators with the highest average value are the first 3 indicators 2 . The average time from receiving the goods until preparing the goods. Sorting to wait for delivery, followed by indicator 4, packaging handling time, packing and preparation process verification, Correct location of the delivery destination and KPI 1, Average value of goods or customer complaints, respectively.

• *ILPI6 Site Selection, Warehousing and Storage* have the potential at a high level. And should continually promote and develop. When considering in detail, it was found that every indicator was at a high level. The top 3 indicators with the highest average values are Indicator 3, the value of the investment in material handling equipment, followed by Indicator 2, warehouse building insurance expenses and Indicator 5 is, the accuracy rate of correct warehouse space arrangement. Sorted by delivery area to enable Delivered correctly in order

• *ILPI7 Inventory Management* as a whole has moderate potential. And should continually improve and develop. When considering this in detail, it was found that the indicators were moderate to low. The top 3 indicators with the highest average are Indicator 1, Investment in protection against possible damage or customer's product insurance cost, followed by KPI 5, product line design and division of space efficient storage of goods and indicator 2, the average time for storing goods before delivery to the destination customer in order

• *ILPI8 Transportation* potential is at a high level and should continually improve and develop. When considering in detail, it was found that every indicator was at a high level. The top 3 indicators with the highest averages were Indicator 5, the rate of delivering goods to customers wholly and accurately, followed by Indicator 2, Speed and Accuracy in Product Delivery, and Indicator 2. Indicator 3 Ability to plan effective delivery, respectively

• *ILPI9 Reverse Logistics* has moderate potential and should continually improve and develop. However, when considering it in detail, it was found that the indicators were moderate to low. The top 3 indicators with the highest averages are KPI 4, customer satisfaction rate per service. And help customers in case of problems with the delivery, followed by KPI 1, the average time taken to receive returned products because the product has a problem of Product delivery quality complaint and KPI 2 Average time taken to receive products that customers request to return, respectively.

Discussion result

From the findings of the research mentioned above. The results can be discussed as follows:

1. An analysis of opinion data on the success factors of the logistics process found that Employees had opinions towards the overall success factor at a high level which should be continuously promoted with being prepared to deal with the ever-changing environment

2. From the assessment of business success factors of transport and logistics entrepreneurs, all nine activities found that Activity 5 (ILPI5) Materials Handling and Packaging, activities Activity 7 (ILPI7) Inventory Management (Inventory Management) and Activity 9 (ILPI9) Reverse Logistics is an activity that should be continuously improved. The increasing competitiveness in the transport and logistics business sector. The researcher has applied the theory of inventory management. Adapted by analyzing the qualitative attitudes, it was found that inventory management is the care, planning and management of unsold assets or inventory, raw materials, and inventory to view the flow of goods from the process. Produced storage process until the following distribution process. This is consistent with the theory of optimizing packaging for material handling. and an assortment of goods to facilitate the loading and unloading of goods and reduce unnecessary activities that good packaging and packaging must facilitate movement and storage. Packaging design must be suitable for handling and warehouse equipment to help reduce material costs. Including considering the theory of the handling process for returned goods. In the event that the customer returns because the company delivers products that do not correspond to the order, Damaged or defective products In which, the reverse logistics theory is lossy and costly. Reverse logistics also occurs in cases such as expired goods; this type of reverse logistics is difficult to administer and operate. Therefore, has a high cost.

Suggestion

From the findings of the research, the researcher has suggestions about the success factors of the logistics process of the case study company as a guideline to increase the efficiency of the logistics process as follows:

1. Competitive advantage management strategies should be further studied. In terms of considering the infrastructure. Consideration of operating results and concrete business plans, such as consideration of income, expenses, etc., in order to clearly point out the operating results and develop additional points or consider investment projects to build greater capacity and potential.

2. Guidelines and policies should be studied from all sectors. What are your opinions on ways to promote capabilities and potential in business? Emphasis on integration from many sectors work together more Emphasis on the study of the problem and solutions or further enhance their strengths along with a survey of business practices from various group companies, including studying consumer behavior regularly to adjust business plans in accordance with current conditions.

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